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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/755,632

01/12/2004

Stephen Baumann

370028-00002

1072

3705

7590

05/08/2006

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EXAMINER

FLANIGAN, ALLEN J

ART UNIT

PAPER NUMBER

3753

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/755,632	Applicant(s) BAUMANN, STEPHEN	
	Examiner Allen J. Flanigan	Art Unit 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
 4a) Of the above claim(s) 18-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

Claims 18-28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10/20/2005.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Kawahara et al. and US patent #6,660,108 to Doko et al. (hereinafter "Doko '108").

Kawahara et al. and Doko '108 both teach the use of Fe-Mn-Si alloys of Aluminum to form heat exchanger fins. Although the claims have been amended to claim ranges of values just outside those taught in Kawahara et al. in particular, the substantial overlap in the values taught in these references with the claimed values is deemed sufficient by itself to establish *prima facie* the obviousness of the claimed alloy. As pointed out in MPEP 2144.05, "a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985)". Further, Doko '108 specifically teach that Fe values above 2.0 % by weight can be successfully employed in such alloys (lines 42-57 of column 3 of Doko '108), and Kawahara et al. specifically teach that Mn values of 0.6-1.8 % by weight

are advantageous (lines 17-21, 45-55 of column 9 of Kawahara et al.). Thus, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to increase the value of Fe used in Kawahara et al. slightly in view of the teaching of Doko '108, or alternately it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to increase the value of Mn used in Doko '108 to at least 0.6 % in view of the teaching of Kawahara et al.

Applicant's arguments filed 3/13/2006 have been fully considered but they are not persuasive or are moot in view of the new grounds of rejection.

In general, the routine optimization of variables (such as ingredients in a composition, such as elements in a metal alloy) known in the art to be result-effective is considered obvious. ***In re Aller et al.*, 105 U.S.P.Q. 233 ; *In re Antonie*, 195 U.S.P.Q. 6.** All of the additives claimed in claim 1 are clearly recognized as result-effective.

Once a *prima facie* case of obviousness has been made, it is incumbent upon the applicant to come forward with objective evidence of nonobviousness. No such evidence is explicitly pointed to in the applicant's response, but various comments made by the applicant merit response.

The illustrative example given in Kawahara et al. seemingly prompted the addition of the "substantially free of breakage" language to claim 1. Based on this single example, applicants incorrectly construe Kawahara et al. as teaching that "Fe concentrations greater than 2.0 % result in breakage during

Art Unit: 3753

cold rolling". However, the teachings of the prior art taken together do not support such a sweeping statement. Kawahara et al. teach that

Mn reacts with Fe simultaneously added in a large amount, to form an Al--Mn--Fe(--Si)-series compound, which suppresses an Al--Fe compound that works as a cathode side, from depositing, to improve self-corrosion resistance.

Since comparative example M employs values of Mn that are below the upper limit of the recommended content of Mn, given the statement above one of ordinary skill in the art, considering the cited statement above, and considering Doko '108's teaching that values of Fe as high as 2.2 % can be successfully used with Mn amounts as low as 0.3 % or less, would expect that, even if the cracking problem of example M were due to early crystallization of the Mn-Fe-Si compound, such cracking would not be a problem where the content of Mn and/or Si were at the upper end of the range taught. In other words, if these elements form a compound during casting, the appropriate amount of any would be proportionate to the amounts of the remaining elements. Thus, Fe content above 2.0 % would not be expected to cause problems if proportionately high amounts of Mn and Si were also used.

It is also inappropriate to attribute the cracking problem of comparative example M definitively to Fe content above 2.0 % by weight in the alloy. Numerous other factors, such as cold rolling parameters, annealing parameters, etc. may contribute to, or cause, the problem experienced in this example.

Doko '108's teaching of the possibility of using Fe values as high as 2.2 percent further supports the *prima facie* case of obviousness. Although both Doko '108 and Kawahara et al. teach *preferred* values that lie just outside the range now being claimed, applicants should keep in mind that nonpreferred embodiments constitute prior art, and that preferred embodiments "do not constitute a teaching away from a broader disclosure or nonpreferred embodiments". MPEP 2123.

Finally, arguments that the ranges now being claimed (that were amended to avoid the prior art) are critical ranges are undercut by the originally filed disclosure which indicates that values of Fe lying within the range taught in Kawahara et al. (i.e. 2.0 % by weight) represent "a good compromise for balancing post braze strength and ease of manufacture", and further that Fe content as low as 1.9 % is appropriate.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on

Art Unit: 3753

the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen J. Flanigan whose telephone number is (571) 272-4910. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (571) 272-4930. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen J. Flanigan
Primary Examiner